CSU taters are TOPS page 12
Citizen of the West is KING of corn flakes page 30
Take a break in a PARK(ing) space page 24

Organic Agriculture
Our program earns a PERFECT SCORE page 16
BEEF. It’s what’s for DINNER.
In KOREA.

The College of Agricultural Sciences in late August teamed up with the U.S. Meat Export Federation to host a group of editors from Korea’s leading lifestyle magazines. Hosts provided visiting editors with information about quality and food-safety practices in every step of the U.S. beef industry, supply chain, from Western cattle ranches to swanky Manhattan steak houses. The first-time tour provided a transparent window on the U.S. beef industry and answered questions from key influencers in an important export market.

Scientists with Colorado State University’s highly regarded Center for Meat Safety and Quality gave the Korean editors research-based insights about food-safety measures through the supply chain, as well as information about consumer trends and the impact of sound production practices on meat quality. Our Agricultural Research, Development and Education Center was a main stop on the cross-country itinerary.

Here’s the significance: Korea was the No. 3 market for U.S. beef exports a decade ago, but that came to a screeching halt in 2003 with a scare over bovine spongiform encephalopathy, commonly known as mad-cow disease or BSE. Korea reopened to U.S. beef in 2008, and since then has rebounded to a No. 5 export market position, according to the U.S. Meat Export Federation, based in Denver.

The educational trip was part of an ongoing effort to rebuff and grow this market—and other Asian markets that increasingly demand U.S. beef as many Asian consumers shift tastes in protein.

Our interaction with Korean editors offers a telling example of the value of Colorado State University’s international work. Economics is the bottom line for much of our international teaching, research and engagement. What does that mean in Colorado? To continue the case example, beef is by far the top commodity in Colorado, where agriculture contributes an estimated $40 billion each year to the state economy.

In 2011, cattle and calves generated more than $8 billion in revenues to overall security.

• Security
Consider global food riots that occurred in 2007-08 and 2010-11 as a result of crop failures and skyrocketing food prices. Such unrest is a clear sign of the need for international agricultural development; put simply, food security contributes to overall security.

Agricultural scientists accept an important responsibility on this issue. We’ve no coincidence that several ongoing international projects in our college—such as work to improve soil fertility in Ethiopia and water management in Afghanistan—receive funding from the U.S. Agency for International Development. The federal agency funds research that holds promise for boosting economic development in the world’s poorest nations while also improving international trade and security for the United States.

Nations may have borders—but knowledge has no boundaries. We’re all better for that, as is the agricultural industry to which we are devoted.

Craig Beyrouthy, Dean
College of Agricultural Sciences
Colorado State University
(970) 491-4274

I was a typically warm September in South Carolina, when Bill Bauerle first noticed something puzzling about tree leaves. It was the same with every species he examined—Paulownia, red maple, oak, birch.

Photosynthetic activity was plummeting. Bauerle’s sensitive instruments measured a distinct slowing of the cycle: carbon dioxide absorbed and sequestered, and oxygen and water vapor released. This was surely a mistake, he thought.

Conventional wisdom among plant scientists held that warm environmental temperatures propelled photosynthesis, and it was definitely warm in the Appalachian early fall. Tree leaves were still green, with easily a month before a deciduous tree sheds its foliage. But study shows trees absorb less carbon than earlier thought as photosynthesis declines.

The scientists used portable steady-state gas exchange instruments to measure photosynthetic activity and transpiration in tree leaves during an international short course on campus last summer. Bauerle used the equipment for a study confirming that length of daylight is a key driver of photosynthesis in tree leaves. The findings will help refine global models of carbon cycling, “confirms ideas Bauerle began formulating back in South Carolina,” Bauerle, the study’s lead author, whose expertise is photosynthesis, said.

The study, titled “Photoperiodic regulation of the seasonal pattern of photosynthetic capacity and the implications for carbon cycling,” confirms ideas Bauerle began formulating back in South Carolina. Photoperiod, rather than temperature alone, is a key driver of leaf activity, according to findings published in PNAS.

In fact, photosynthetic activity peaks on the summer solstice—the longest day of the year—and begins to wane long before autumn’s chill, the study shows. The drop in photosynthetic activity means trees absorb less carbon dioxide than they had on the longest day of the year and ultimately sequester far less carbon on a global scale than earlier thought, the researchers found. Correctly accounting for the impact of photoperiod on tree leaf activity adjusts global estimates of current carbon uptake based on vegetation photosynthetic activity.

“Researchers found photosynthetic activity begins to decline many weeks before the leaves of deciduous trees change color and drop to the ground during fall. ‘Even in the early fall, tree leaves are lush and green, but our study found that their physiological activity is much less than we’d expect based on appearance. Because of that, we have been overestimating the amount of carbon they are fixing,’ Bauerle said.

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Jessica Davis had an idea that came from thin air: improve farming and global economic development by finding a simple, cheap way to make nitrogen fertilizer.

Davis, a professor in the Department of Soil and Crop Sciences, and one of her former graduate students, Mike Massey, teamed up with an ingenious idea to provide an essential plant nutrient.

“Four years ago, I had never even looked at a cyanobacterium,” Davis said. Now, it’s part of her everyday life.

The team’s basic approach: Culture cyanobacteria from farmers’ fields and nearby water bodies; the locally derived materials reduce costs and problems with invasive species. After the cyanobacteria are cultured from local soils, a process that takes about six months, the cultures are returned to farmers.

The blue-green algae then are grown in farm-based ponds, so farmers produce their biofertilizer on-site. During experimentation, Davis and her collaborators have delivered the nitrogen-rich fertilizer directly to soil using drip irrigation.

Davis and Massey are working to perfect the technology so the biofertilizer can be produced in a volume, timeframe, and at a cost that fits farmers’ needs. As the duo-carry out research, they keep an eye on making the system management and maintenance as simple as possible, while maximizing profitability for farmers.

“That’s the goal – keep it cheap and simple,” Davis said. “I think we can do this all with local materials, which will make it affordable.”

The concept holds potential for U.S. farmers who want sustainably produced soil nutrients. Davis notes that most nitrogen used in the United States is imported from Canada, Russia or Ukraine. That drives up costs and farming’s energy consumption.

The innovation also holds potential in developing nations, where nutrient-depleted soils are a critical concern; subsistence farmers are desperate for solutions to improve harvests – and their livelihoods.

In fact, Thin Air Nitrogen is actively working on the project with collaborators at Hawassa University in Awassa, Ethiopia, a land-locked country where transportation problems make fertilizer costs prohibitive. Davis led a delegation from the College of Agricultural Sciences to Hawassa University in early November to address this and other joint projects.

Davis hopes the bacteria-based biofertilizer will help improve the lives of subsistence farmers and their families in sub-Saharan Africa. In this poverty-stricken region, the vast majority of nations have hunger problems ranging in severity from serious to extremely alarming, according to the 2012 Global Hunger Index, released in October by the International Food Policy Research Institute.

Farmers could sell the nitrogen fertilizer or use it with their own crops, improving food security without the need for expensive, imported chemical fertilizers transported over rutted roads. Biofertilizer application in Ethiopia could also increase water-use efficiency, reduce erosion, improve soil health, and decrease deforestation that results from agricultural expansion, Davis said.

Recent work suggests the biofertilizer might even improve crop nutrient content, suggesting a way to reduce malnutrition in the developing world.

That drives up costs and farming’s energy consumption. Indeed, Rajiv Shad, USAID administrator, holds promise for boosting economic development because the federal agency funds research that addresses major global issues.

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Jan Leach, Colorado State University Distinguished Professor of plant pathology and adjunct scientist at the International Rice Research Institute, Philippines, has studied for three decades — as a “select agent” with potential for use in bioterrorism.

“I cried,” said Leach, a Colorado State University Distinguished Professor of plant pathology. “I had never heard of regulations for her laboratory and greenhouse as she works to understand and strengthen rice resistance to Xanthomonas oryzae pv. oryzae, which causes bacterial blight disease and devastating crop losses across Asia.

In complying, Leach unwittingly has gained new expertise in managing dual-use research, meaning studies whose findings could greatly improve human well-being, yet in the wrong hands could be used for biowarfare or bioterrorism.

Leach’s insights recently led to her appointment as a new member of the high-profile National Science Advisory Board for Biosecurity. Dr. Francis Collins, director of the National Institutes of Health, invited Leach to join the board, her two-year term began in August.

The 25-member federal advisory board, coordinated by the U.S. Department of Health and Human Services, is composed of leaders in a range of scientific disciplines. The board advises federal agencies about the complexities of dual-use research, and suggests guidelines to protect public health and national security without hindering scientific progress.

“I’m kind of a rose person, so I don’t like to think about terrorists. But I don’t want to see science shut down because of irrational people,” said Leach, who works in the CSU Department of Bioscience and Pest Management.

It’s critical that scientists are involved in policy discussions, she said, because they can provide fact-based views of risks and benefits of dual-use research. This year, dual-use research has been a red-hot topic among life scientists, sparked by debate over the publication of studies involving the avian H5N1 influenza virus.

“What’s important is to have rational scientists making decisions, rather than people who don’t have the full view of the science involved,” Leach said. “Many of these discussions involve risk-benefit analysis. What’s the balance? If we block research because of the potential for evil, do we block our ability to help people?”

Leach is a foremost expert in rice genomics and the interactions between plants and pathogens at the molecular level. As a University Distinguished Professor, she is among a select group of world-class CSU professors known for outstanding scholarship and achievement.

She also is a past president of the American Phytopathological Society, a scientific organization dedicated to the study and control of plant diseases, and is current chair of the society’s Public Policy Board, among other prominent roles.

“Dr. Leach’s appointment to the National Science Advisory Board for Biosecurity is a great testament to her research expertise and her dedication to science as a path for improving food security and quality of life for people around the world,” said Craig Beyrouty, dean of the College of Agricultural Sciences. “Her public policy insights are an important contribution.”

Leach has worked extensively with Xanthomonas oryzae pv. oryzae, a bacterial pathogen that causes rice blight disease. Started the work because of opportunity to research a pathogen with a distinct potential for use in a well-known crop, using new genetic and genomic technologies.

Has used the work as a genomic model to understand rice within a system that includes other diseases, pests, temperature and moisture variations, and more.

Expertise has led to new studies in bioterrorism and ways to boost the health benefits of rice.

Work has been funded by National Science Foundation, U.S. Department of Agriculture, U.S. Department of Energy and the Rockefeller Foundation, among others.

Teaches graduate-level courses in Plant Bacteriology, Bioenergy Technology, and Advanced Molecular Plant-Microbe / Pest Interactions.

More than a dozen people, including graduate students, work in the Leach Lab at CSU.

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The INNER LIFE of PLANTS

by Jennifer DIMAS

New Monfort Professor McKay examines plant adaptations to improve agriculture

by Dan Bihn

The Monfort Professor designation spans two years. Rajiv Chishty, Colorado State University’s vice president for research and innovation, will be a monfort Professor in the Department of Bioglobal Evolutionary Ecology and Plant Breeding for Drought Tolerance.

McKay is an active mentor for undergraduate students. He and colleague Stephen Chisholm developed and coordinate a Biological Summer Undergraduate Research Enrichment Program. Students in the program conduct independent laboratory research, with mentoring and peer interactions that help develop presentation skills, laboratory techniques and experimental design skills.

In addition, McKay has led a plant science outreach effort at a local elementary school that annually exposes thousands of K-12 students and their parents to plant science topics.

McKay has received a number of recent awards and recognitions. For instance, he was one of 20 invited participants to New Physiologist Workshop: Ecological and Evolutionary Genomics of Plant Adaptation in the United Kingdom. He was a featured speaker at the 2011 Keystone Meeting on Plant Abiotic Stress Tolerance Mechanisms, Water and Global. He was also featured speaker at the annual Ecological Genomics Symposium in 2010. And he received the 2009 Community Science Outreach Award from Putnam Elementary School in Fort Collins.

About the award

The Monfort Family Foundation established the Monfort Professors award in 2002 to reward innovative teaching and research among junior faculty. The program helps CU recruit and retain talented faculty. Faculty members are nominated for the award and are competitively selected; the designation spans two years. Rajiv Khoos, a professor of precision agriculture in the Department of Soil and Crop Sciences, previously was a Monfort Professor in the College of Agricultural Sciences.
You say POTATO, I SAY COLORADO

CSU spuds grabbed the spotlight this year. Take a look!

1. Colorado potato sales totaled nearly $250 million in 2011 – making potatoes tops among all fruits and vegetables in Colorado and the state’s No. 7 commodity overall.

2. In Colorado, the San Luis Valley is spud hub. The majority of potato acreage here – about 60 percent – is planted in varieties developed by Colorado State University’s Potato Breeding and Selection Program.

3. The San Luis Valley Research Center is home base for CSU’s potato program. Meet the tater team: Rob Davidson, from left, center manager and specialist in seed potatoes and potato certification; Dave Holm, potato breeder; Sastry Jayanty, authority on post-harvest physiology and storage; and Samuel Essah, expert in potato production, physiology and storage.

4. Dave Holm – email name, “spudmkr.” He leads the Colorado Potato Breeding and Selection Program. The program has released 28 varieties since it began in 1979 – impressive, because it takes 14 years to create a new type of potato. These cultivars have been developed just for Colorado’s environment and markets, with emphasis on yield, sustainability, improved quality, flavor, and human-health benefits.

5. The CSU potato program is a model for its successful work with state growers. In fact, the Colorado Potato Administrative Committee, which represents growers, supports CSU potato research to the tune of about $250,000 a year.

6. Caroline Gray, a research associate at the San Luis Valley Research Center, works in a greenhouse with potatoes pruned for cross-pollinating. The CSU program uses traditional plant-breeding methods; these spuds are not genetically engineered.

7. Gray removes anthers, or male parts, from the flower of a potato plant to collect their pollen. This is a male parent.

8. Now Gray applies pollen from the male parent to the stigma of the female parent. Anthers have been removed from the recipient flower to avoid potential pollen mixes. This way, crosses with desirable progeny can be identified and repeated.

9. Rob Davidson examines microtubers stored long-term for use in tissue culture. This material contains traits that might be useful in future potato breeding.

by Coleman CORNELIUS
10. These plantlets, held by Carolyn Keller, have been propagated through tissue culture. Tissue culturing occurs in the sixth year of the potato-breeding process, when researchers have distinguished a potential new cultivar — called an “advanced selection” — and are working to perfect it for seed certification.

11. Want a tasty tater? Dial up Sastry Jayanty. Here, he collects volatile compounds from a potato. These compounds contribute to a potato’s flavor through a specific aroma profile. Jayanty’s volatile testing adds to potato research, with the aim of producing more flavorful potatoes.

12. Want a healthy tuber? Call Tatiana Zuber. She recently earned a doctoral degree in horticulture and examined the cancer-fighting antioxidant compounds in potatoes with colored flesh. These include the Purple Majesty, a popular specialty potato with vivid purple pigmentation, which CSU released in 2005.

Here are two popular CSU potato varieties that drew special attention during the 2012 growing season:

13. Mountain Rose, released in 2005, is a specialty fresh-market variety with red skin and light-red flesh. It’s a multipurpose potato that’s high in antioxidants. Holm has developed pigmented potatoes by introducing wild and heirloom potato species during breeding.

14. Sangre, released in 1982, is a fresh-market variety with red skin and white flesh. It’s a flavorful spud that stores well and is good for boiling and baking.

15. Presenting the 2012 White House Kitchen Garden, featuring potato varieties Sangre, Mountain Rose and Canela Russet. That’s right, First Lady Michelle Obama and a group of schoolkids planted the three varieties in the First Garden last spring. All three were developed by the CSU Potato Selection and Breeding Program. Just another sign that our taters are tops!

The CSU potato program is now introducing two new varieties — called Masquerade (16) and Crestone Russet (17) — with at least one more new variety waiting in the wings for naming and release in the coming year. Look for them at a gardening center or market near you!

16. Masquerade

17. Crestone Russet

Sources: Colorado Department of Agriculture, Colorado Potato Administrative Committee, Colorado Potato Breeding and Selection Program, Obama Foodorama. Photographs by Dan Bihn, Colorado Potato Breeding and Selection Program, and Eddie Gehman Kohan/ObamaFoodorama.com
The Organic Agriculture Program, offering the most popular minor in the College of Agricultural Sciences, recently earned a perfect score for the quality and breadth of its teaching, research and outreach from a leading industry foundation that evaluated similar programs at land-grant universities nationwide.

The Colorado State University program was among 70 evaluated by the Organic Farming Research Foundation for its 2012 Land Grant Assessment report. The CSU Organic Agriculture Program was one of just six to attain perfect marks for its offerings.

“As the organic industry has grown from $7.4 billion in sales in 2001 to $28.6 billion in 2010, the Organic Farming Research Foundation has expected the land-grant university system to keep up the pace with increased investment in organic research, outreach and training opportunities,” according to the foundation report.

The CSU Interdisciplinary Minor in Organic Agriculture, established in 2005, exemplifies the university’s sustainability focus. The Organic Agriculture Program benefits from frequent interaction with industry partners, including the prominent Grant Family Farms; from northern Colorado’s vibrant farmers market scene; and from university resources, including expert faculty and gardens designed for teaching and research.

The minor has 41 students enrolled in fall 2012, with most majoring in horticulture or soil and crop sciences.

“We are pleased to offer a high-quality program that appeals to students while also advancing research and engagement in a dynamic sector of agriculture. It’s rewarding to receive national recognition for this work,” said Craig Beyrouty, dean of the College of Agricultural Sciences.

Students in the program said they picked the organic path because it focuses on raising food with a philosophy and practices that value long-term environmental sustainability. This focus plays out as organic farmers and ranchers forgo synthetic fertilizers, pesticides, antibiotics, genetic engineering and added hormones. Instead, producers use naturally derived inputs and management strategies based on knowledge of complex land, water and food systems.

Driving the sharp increase in nationwide sales of organic products is an exploding desire among consumers to understand the sources of their food and how it’s produced.

“Organic systems are important to promote. Whatever I do, I want it to be as sustainable as possible.”
— Joseph Jonas, senior in horticulture. Grew up on Midwestern farm raising corn and soybeans using conventional practices and wants to move into organic production.

ORGANIC Continued on page 18

Feeding the Community
The CSU Horticulture Field Research Center north of Fort Collins grows an array of vegetables and berries as part of the university’s specialty-crops and organic research. The produce is donated to the Food Bank for Larimer County for individuals and families in need.
“The benefits of organic agriculture will eventually speak for themselves because it’s a more sustainable approach. We are growing food with finite resources, and we won’t have to convince people to use resources more efficiently because we won’t have a choice.”

— Sara Kammlade, horticulture graduate student with a focus on organic production. Came to CSU from Illinois and has worked at the CSU Horticulture Field Research Center.

Organic Systems, students visited Native Hill Farm of Fort Collins to examine soil fertility, irrigation methods, pests, weeds and crop disease alongside the young producers who run the farm. Students may extend their learning with options including composting internships, work at the USDA in October 2012.

About organics

Consumer demand for organically produced goods has shown double-digit growth for more than a decade, providing market incentives for U.S. farmers across a broad range of products, according to the U.S. Department of Agriculture Economic Research Service.

Organic sales account for more than 3 percent of total U.S. food sales, according to recent industry statistics, the USDA-ERS reports. There are 333 operations in Colorado that are listed as certified organic by the USDA National Organic Program. This includes farms, ranches, processors and handlers.

Of Colorado organic operations, 119 produced crops, livestock and poultry totaling more than $70 million in sales in 2011, according to the Certified Organic Production Survey released by USDA in October 2012.

“Adding to that strong scientific foundation, we’re providing a rigorous understanding of organic agricultural production and the critical-thinking skills needed to objectively compare costs and to dissect perceptions,” Stonaker said. “We want students to thoroughly consider whether organic agriculture is a viable answer, and if so, how to approach it.”

Students take courses in ecology, soil fertility, entomology and plant pathology, among others. They gain hands-on field experience with coursework in composting and greenhouse, vegetable and fruit production.

During a summer course called Diagnostics in Organic Systems, students visited Native Hill Farm of Fort Collins to examine soil fertility, irrigation methods, pests, weeds and crop disease alongside the young producers who run the farm.

The students diagnosed tomato spotted wilt virus in some of the farm’s tomato crop and iris yellow streak virus in some of its leeks. Both are spread by thrips, a tiny insect that functions as vector of highly destructive plant pathogens.

Stonaker and Addy Elliott, a faculty member in the Department of Soil and Crop Sciences and co-coordinator of the Organic Agriculture Program, pressed the students to provide solutions. These included use of resistant varieties, screening over high tunnels, reflective mulch to create insect confusion, sticky traps, pesticides approved for use in organic systems, and predatory mites and minute pirate bugs.

“If you’re providing the best habitat possible for your plants, you shouldn’t have many problems. But it’s hard to get there,” Katie Skaa, co-owner of Native Hill Farm, told the students.

“Organic has really done a lot for feeding people worldwide, but it has also created environmental issues that we need to address in order to continue meeting food needs.”

— Colton McDonald, junior in horticulture. Completed a summer internship at Grant Family Farms and wants to apply his hands-on and classroom learning by starting a small organic farm.

“Often in the camp of ‘locavores,’ these consumers crave fresh, delicious, healthy food that contributes to local economies — and is raised with sustainable practices that protect global environmental resources.

Overall, organics compose a tiny sector of the agricultural industry. Yet the sector is flourishing as consumers demonstrate their willingness to pay the higher costs of organically and often locally grown food.

“I believe we’re all doing valuable work in agriculture. We all want to feed the world,” said Keegan Athey, a junior majoring in soil and crop sciences with a minor in organic agriculture. Athey assists with research into cost-effective organic production methods for tomatoes, peppers, eggplants, raspberries and other crops at the CSU Horticulture Field Research Center north of Fort Collins.

If you think organic agriculture is crunchy granola stuff, step into a couple classes in the CSU Organic Agriculture Program. There’s a distinctly scientific focus.

“Our program provides students with a strong foundation in soils, pest management and crop production,” said Frank Stonaker, assistant professor in the Department of Horticulture and Landscape Architecture and co-coordinator of the Organic Agriculture Program.

“Adding to that strong scientific foundation, we’re providing a rigorous understanding of organic agricultural production and the critical-thinking skills needed to objectively compare costs and to dissect perceptions,” Stonaker said. “We want students to thoroughly consider whether organic agriculture is a viable answer, and if so, how to approach it.”

Students take courses in ecology, soil fertility, entomology and plant pathology, among others. They gain hands-on field experience with coursework in composting and greenhouse, vegetable and fruit production.

Students Keegan Athey, left, and Sara Kammlade get hands-on experience growing organic produce with direction from faculty expert Frank Stonaker.

The results of their efforts are not always what they expect.

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That's COMPOST PROGRAM THRIVE

Students help campus Compost Program thrive

A major effort among Colorado State University’s green initiatives – the Compost Program – will mark its second anniversary in April, converting more than half the total food waste from campus residential dining centers into a rich soil amendment.

By then, the program will have produced an estimated 250,000 pounds, or nearly 125 tons, of nutrient-loaded compost for campus flower beds, gardens and landscaping. Come spring, plants will sprout and bloom on the grounds of the very residence halls where students trashed their food waste, the essential ingredient in CSU compost.

Meanwhile, the Compost Program has provided 10 students from CSU’s College of Agricultural Sciences with hands-on internships and independent study, prepping them for careers in a new era of sustainability. Student compost work is part of CSU’s Organic Agriculture Program, which recently earned a perfect score from a leading industry foundation for its teaching, research and outreach.

“The philosophy and practice of organic agriculture revolve around re-use. In an organic system, it’s important to re-use your waste and turn it into something beneficial,” said Addy Elliott, known as the university’s “compost queen.” A faculty member in the Department of Soil and Crop Sciences, Elliott provides program consultation and supervises students working with the composting system.

In its first official year, the alchemic Compost Program – notable for its reliance on university faculty, staff and students – has proven it can transform the problem of food waste into a beneficial product.

“We have a great team that brings it all together,” said Tonic Miyamoto, lead team member for CSU Housing and Dining Services. “The Compost Program got us into the mode of focusing on food waste and diversion paths. Our work has set the stage of our next step of compost expansion.”

It’s a remarkable achievement for the program that began as a pilot project in April 2011. That’s when Housing and Dining Services invested $140,000 in a fully automated Earth Flow composting system and began operation on the CSU Foothills Campus.

It took several months of fits and starts – marked by equipment troubles and “recipe” tweaks – for the Compost Program to turn the center and begin running smoothly. So frustrating were those initial months that members of the CSU compost team dubbed their system “Oscar,” a reference to Sesame Street’s famed garbage man.

But the program found its groove. Oscar now processes about 10,000 pounds of waste material every week.

In terms of volume, about one-third of the material is food waste from the bustling Braiden Hall and Ram’s Horn residential dining centers on campus. This waste, the compost nitrogen source, is mechanically ground and centrifuged, producing the dense ingredient of food waste, known as “pulp.”

The other two-thirds of the compost starter material, the carbon source, is a mix of hay, straw, wood chips and horse manure from the nearby CSU Equine Center.

CSU Facilities Management hauls waste to the composting system, where students feed Oscar its odiferous meals – amounting to some 2,000 pounds of waste material every weekday.

“You have to be out here frequently to make it work,” said Alyssa Eckley, fall semester composting intern and organic agriculture student, as she recently added bins of organic material every week to the program’s loop.

Eckley and fellow student Cody Baker, completing an independent study project in composting, watched as a large auger churned through rank muck, contained within the mechanized system known as Oscar, occasionally turning up a pineapple top or another vaguely familiar chunk.

“It’s so gross, but so cool, right?” Elliott enthused.

As Elliott and her students conferred, the compost check-in quickly became a highly technical and scientific discussion about carbon, nitrogen, temperature, aeration and moisture.

In about two months, with proper management of these factors, the muck would transform into a dark, crumbly and pleasantly earthy-smelling soil amendment.

“Compost is useful and it’s re-using waste that otherwise would be put in a dump,” Baker said, as he used a temperature probe to check the progress of curing compost. “Learning to compost will allow me to keep my soil-fertility program centered on-farm.”

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--- Addy Elliott, Department of Soil and Crop Sciences, and CSU’s “compost queen”
At the start of each fall semester, the College of Agricultural Sciences welcomes freshmen and transfer students to campus with a special daylong orientation called Ram Camp. The program helps new students connect to our academic community — a key to college success. They interact with faculty members, learn about college programs, meet new friends and take part in team-building. Ram Camp is capped with formation of a human “A,” for agriculture, academics and our Ag Family.
Landscape architecture students at Colorado State University highlighted the value of community open space this fall by participating for the first time in an international design event called PARK(ing) Day.

Four student teams transformed automobile parking spots in Old Town, Fort Collins, into miniature public parks on Sept. 21.

“We’re converting a parking space into a public space,” senior Brandon Parsons explained, as he and teammates put final touches on their design on Laurel Street. The street-side park included containers of rabbitbrush, plum trees and ornamental grasses, along with seats crafted from charred wood, as a reminder of the High Park wildfire that scorched foothills west of Fort Collins last summer.

“The key idea with this installation is the sense of community that draws people together here and helps us move forward. The sense of community is huge in this town,” Parsons said. “We’re also focusing on the value of sustainability, and ways recycled materials can be incorporated into public spaces.”

Judging by responses, passersby approved. “That’s awesome. Wow! Sweet, guys, ‘one called out while strolling by. Two drivers honked their horns enthusiastically.

PARK(ing) Day, begun in San Francisco in 2005, draws attention to the vital role of public parks, and the ability of thoughtfully designed public spaces to enrich quality of life in communities worldwide. The little street-side parks are temporary – installed for only one day – yet designers hope their ideas about public space take hold permanently.

The CSU student chapter of the American Society of Landscape Architects spearheaded PARK(ing) Day in Fort Collins. Student organizers were inspired by a campus visit from John Rela, a noted landscape architect in San Francisco, who started PARK(ing) Day seven years ago.

“PARK(ing) Day encourages people to take part in our community and the civic planning process, and to take your own place and responsibility in that planning process,” said Ben Canales, a CSU landscape architecture major and president of the student group.

Canales and his teammates created a park with wooden pallets, and interpretive materials conveyed the role of these simple skids in sustaining the global economy. The students said they recognize communities aren’t likely to build parks with pallets, yet they wanted to convey a broader concept.

“People will connect with a space if they’re learning something,” Canales said, while hammering together his structure. “The more you can get people to care about a space, the more they will take care of it. As a designer, I’d like to provide a message, not only a place to relax.”

A block away, Stephanie Larsen and her team spread sod over an asphalt parking spot, provided moveable wooden benches under a potted maple tree, and used ornamental grasses and a bicycle rack to screen traffic on Mountain Avenue.

“This park promotes green space in an urban environment,” she explained.

Added teammate Brian Horton: “Combining the two systems – urban and natural – is really cool. It says a lot about what you can do in a city.”

Around the corner on College Avenue, landscape architecture students filled a parking spot with plants, wooden benches, and interpretive materials.

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About CSU Landscape Architecture

• CSU offers the only accredited undergraduate degree program in landscape architecture in the Western states of Colorado, New Mexico, Wyoming and Montana, according to the American Society of Landscape Architects.

• The program began in 1975 and is housed in the CSU Department of Horticulture and Landscape Architecture.

• Curriculum focuses on core drawing and planning skills; understanding of plants and landscaping; and key theories about the relationships between design, nature and society.

• We recently added a master’s degree program in landscape architecture.

• The Harvard connection: Three of our six landscape architecture faculty members were trained or taught at the Harvard University Graduate School of Design; all of our faculty have extensive professional experience.

• For information, visit http://lamar.colostate.edu/things/ or call (970) 491-7283.
Meat Mastery

Team wins national championship in Meat Science Quiz Bowl

Dani Shubert and Will Callis perched on stools in the commercial kitchen of the Colorado State University Animal Sciences Building and assessed a flat iron steak. It’s a trendy cut of beef, popping up rubbed and seared in recent years at upscale restaurants, in online recipes, and with celebrity chefs. That’s because the flat iron steak is tender, flavorful, and typically costs half as much per pound as prime boneless ribeye.

Shubert and Callis know these attributes, which make the flat iron a foodie favorite. They also know the scientific backstory: This steak is from the infraspinatus muscles of the beef chuck. In isolating the cut by muscle characteristics, meat scientists have transformed the lowly chuck from subprime pot roast into steak that appeals to epicures – and boosts profit potential for the food industry.

Such knowledge helped Shubert, Callis and six fellow CSU students claim the national title in the annual Meat Science Quiz Bowl in June. To become national champions, the CSU group bested 29 other squads from 19 universities across the country during the American Meat Science Association’s professional conference at North Dakota State University.

It’s the first time the CSU Meat Science Quiz Bowl team has earned a national championship in 11 years of competition. To win, the group beat a team from the University of Nebraska in a tenth round of questioning with a live audience of industry leaders.

“We’re very proud of these bright students for successful teamwork that put their learning to use for a first-time national championship,” said Kevin Pond, head of the CSU Department of Animal Sciences. “This win reflects overall excellence in CSU’s meat science program and adds to our recent reserve national championships in meat judging and meat animal evaluation.”

The national Meat Science Quiz Bowl uses a “Jeopardy!” format, with answers signaled by buzzer. But for student competitors, it’s no mere trivia contest.

“Competing has helped me understand the science behind the product we’re making,” said Shubert, an animal science major who will coach the next team. “Our work is meant to improve quality for consumers. In the end, providing them with a safe, wholesome, reasonably affordable protein is the name of the game.”

Knowledge needed for winning the national title also gives these Animal Sciences students the confidence to interact with meat-industry executives, they said.

“Through the team, I have a very good background in animal science and meat science. That gives me a much more complete understanding of the business,” said Callis, who graduated in May with dual degrees in animal science and agricultural economics.

Talk about a complete understanding. The CSU Meat Science Quiz Bowl team can explain the chemical processes that trigger color changes and impact meat flavor, turning a steak from top pick to manager’s special.

Judging teams amass championships

Students in the CSU Department of Animal Sciences scored other major wins during the recent academic year:

- National Champion 2011 Arabian Horse Judging Team
- Reserve National Champion 2011 Meat Judging Team
- Reserve National Champion 2012 APHA Horse Judging Team
- Reserve National Champion 2012 Meat Animal Evaluation Team

The CSU Meat Science Quiz Bowl team can explain the chemical processes that trigger color changes and impact meat flavor, turning a steak from top pick to manager’s special.

Team members can rattle off the most significant federal laws and guidelines of past decades – from the Meat Inspection Act of 1906, partly sparked by Upton Sinclair’s “The Jungle,” to the sweeping food-safety management system known as the Hazard Analysis and Critical Control Point system. Team members can explain the chemical processes that trigger color changes and impact meat flavor, turning a steak from top pick to manager’s special.

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Catering students have close encounter with Obama during visit

You might say Animal Sciences student Maggie Weinroth met the president over a steak dinner in Fort Collins.

Shortly before President Barack Obama was scheduled to speak at an Aug. 28 campaign rally on campus, Weinroth was helping a hot tray of three dozen medium-rare ribeye steaks through the CSU Animal Sciences Building. She was helping to feed members of the Secret Service, national media pool and White House staff.

That’s when the president hustled through the building with his security detail and aides, stopping a stunned Weinroth — still gripping the tray of steaks — as she and another student watched Obama stride by.

“I was carrying steaks and wasn’t aware he would be coming through. It was a surreal experience to be within a few feet of the president of the United States,” Weinroth, a junior studying animal science, recalled of the close encounter. “We were working, and we figured we weren’t going to be able to see him speak. We were not expecting him to be in such close proximity, so it was really, really cool.”

The Obama rally marked the first visit to Fort Collins by a sitting U.S. president and drew 13,000 people to the Monfort Quad just outside the CSU Animal Sciences Building.

The stop was part of a campaign tour of college campuses nationwide.

As the crowd gathered at CSU, Weinroth and other student members of the CSU Meat Judging Team and Meat Science Quiz Bowl Team assembled for a different reason. They catered dinner for 65 campus guests, including national news reporters, White House staffers and Secret Service agents traveling with the president.

The students prepared and served grilled ribeyes, roasted potatoes, green beans, salad and dinner rolls.

The president did not dine with other visitors in the Animal Sciences Building, nor did he meet the student catering crew as he walked through the building en route to the rally stage. Yet the meal and the students drew rave reviews.

“They did such a fantastic job yesterday!” a rally organizer wrote in a thank-you email. “The students were professional and on time. I am packing up the President’s traveling pool now … and they are continuing to praise and talk about the food, especially the steaks! I’ve done a lot of these, and I’ve never ever heard the press talk so much about the catering.”

The eight students who catered at the political rally didn’t have an audience with the president. But preparing a meal for his posse was plenty fun. And the two who unexpectedly encountered President Obama have a college moment to remember.

“I was with Maggie carrying a bowl of butter for the dinner rolls, and we saw him in transit. We were like, ‘Was that really the president?’ It was a pretty unique experience,” said Jenna Oxenhandler, a junior on the Meat Judging Team.

“I definitely called my mom after that.”

Catering raises money for student teams.

It follows that students on our meats teams raise money for competition by grilling meat.

Members of the Meat Judging Team and Meat Science Quiz Bowl Team work for a campus catering outfit overseen by the CSU Center for Meat Safety and Quality.

The catering group prepares full meals for clients, but its specialty is meat — namely, steak, prime rib, hamburgers, smoked beef brisket and smoked pulled pork.

The group annually caters about 50 campus events, which may draw from 10 to 750 diners.

Earnings cover costs of competition for the two teams.

Those costs total nearly $40,000 each year for about 25 undergraduate students, and come in the form of travel, lodging and other expenses incurred for top-tier competition.

Yet the catering experience is more than a simple fund-raising tool; it allows students to practice critical concepts, such as food safety, and to interact with consumers.

“Our entire program benefits by providing students with exposure to the last step in the production chain. They gain a better understanding of consumers and their preferences,” said Dale Woerner, assistant professor in the Department of Animal Sciences and faculty adviser to the teams. Woerner is a meat scientist who oversees the catering venture.

Plus, students who help with catering learn to cook a heck of a steak.

They can explain how the longissimus dorsi and gluteus medius muscles visible in a strip steak indicate its location in the beef carcass and its tenderness and flavor attributes.

The students said they hope wide-ranging knowledge of industry history, meat quality, food safety, animal physiology, and livestock growth and development will help them pursue science-based careers in agriculture.

In fact, they’re well on their way: Shuhart had a summer internship in the research and development group of chicken producer Pilgrim’s; teammate Buebra Davis helped to conduct a feed study at a large pig farm run by Seaboard Foods; and Callis is beginning graduate studies in beef economics.

“Quiz Bowl has allowed me to see another aspect of livestock and how their bodies work. It gave me insight into how different feeds can affect an animal throughout its life,” said Davis, a junior who wants to pursue a career in swine nutrition. “It’s also been a great way to make connections that will help me in the future.”

Other members of the 2012 CSU Meat Science Quiz Bowl team were: Chloe Goodwin, Lauren Jacobson, Megan Myers, Jenna Oxenhandler and Megan Semler. Scott Howard, a doctoral student, coached the team.

Animal Sciences students Jenna Oxenhandler, left, Maggie Weinroth and Jordan McHenry grill up a storm to raise money for CSU Meat Judging Team competition. McHenry, a graduate student in meat science, coaches the team.
I n 1936, when he was 15 years old, Johnny Matsushima got his first Hereford steer as a 4-H project and showed it at the Weld County Fair in Greeley alongside a 4-H rival named Kenny Monfort. Monfort, who would become a Colorado beef mogul, had the grand champion steer at the fair that year. But the diminutive Matsushima — an inquisitive boy dwarfed even by the short cattle of the time — had an idea.

He took his steer back to his family’s Platteville farm. He fed the steer a bit longer, hailed the animal to auction at the Denver Stockyards, and fetched top dollar.

In beef nutrition he was an expert in feedlot feeding, and packing industry.

“I don’t think Colorado would be a top-five cattle feeding state if it wasn’t for Johnny’s work,” said Daryl Tatum, a professor in CSU’s Department of Animal Sciences, who is among those calling Matsushima’s torch in understanding links between nutrition and meat quality “Johnny did as much as anybody in teaching and research and to elevate the commercial cattle feeding industry in Colorado and elsewhere. He was a game-changer.”

For his achievements, Matsushima will be honored on Jan. 14 as 2013 Citizen of the West by the National Western Stock Show in Denver, and given the Pioneer award by the Colorado State University College of Agricultural Sciences.

Matsushima’s greatest discoveries came during his 30-year career as a professor in the Colorado College of Agricultural Sciences.

Coaching a diversity of students and researchers to work on feed efficiency and to develop diets that would reduce animal waste, Matsushima has made the most significant contributions to beef feeding and packing in the world of agriculture. What he has accomplished as much as anybody in teaching and research to change the way we think about problems in a different way.

- He developed and patented a feedlot evaluation program, “Monfort” Feedlot Efficiency, which “has more value today than it was 50 years ago,” said Randy Bach, a former Matsushima student and executive vice president of CattleFax, which provides industry analysis. “The technology he developed 50 years ago has more value today than ever before. That’s phenomenal.”

- Bach continued, “Even a 1 percent change in feed efficiency can make significant changes in cost and profitability, so the things he brought to the industry have become more and more valuable over time.”

- The late Kenny Monfort, an early adopter of the technology, joked that he flaked more corn than Kellogg’s at feedlots.

- “Although researchers at many universities were working on feeding at the same time, I think Johnny’s work was the best and most significant,” Monfort told the Denver Post for a feature about Matsushima, headlined “Genius of the feedlots” and published in 1987.

- Monfort was assuming leadership of Monfort of Colorado Inc. from his father, Warren, and was helping establish the first 100,000-head cattle feedlot near Greeley.

- “We thought enough of it that we changed our whole feeding program,” Monfort said of Matsushima’s new, flaky rations. “It’s cut down the number of days we have to feed an animal, and we get better conversions of feed to beef. We ran some tests, then we built a plant to make the flaked feed, designing it, mainly, just by listening to Johnny.”

- Each workday morning, Matsushima obsessive-ly monitored the amount of feed that cattle had consumed — or left behind — in bunkers at CSU’s old Rigden Farm on the east side of Fort Collins, where he conducted nutritional trials and noted observations in daily record books. It was part of pinpointing technologies and rations that increased weight gain and decreased time to market.

- Such constant questioning sparked Matsushima’s big idea in 1966. It was a frigid morning, and he was eating a breakfast of hot cereal with some cattle feeders. Then it hit him: Maybe hot cereal would appeal to feedlot cattle. The idea launched his research in steam-flaked feed grains.

- “It’s one of the pioneers who started developing modern cattle feeding procedures,” said Paul Clayton, senior vice president for expert services with the U.S. Meat Export Federation and another former student. “Innovation was one of the things we were really pressed to work on at CSU. He motivated us to think about problems in a different way.”

Matsushima recently visited the Kauer Feedlot, a 100,000-head feedyard established by Monfort of Colorado east of Greeley in 1974, it is now owned by JBS Five Rivers Cattle Feeding. A pen of Angus-cross-bred cattle watched as Matsushima scooped up a handful of feed from the bunk and examined the mix of flaked corn and bits of sausage, drillers grain and molasses-based supplement.

“Hasn’t changed much,” he noted to Kallen Moore, a young feeds professional who oversaw the Kauer Feedlot.

Matsushima’s evolution into a foremost scientist in the world of beef, I do not know anyone who has had more influence than Johnny Matsushima. “Although researchers at many universities were working on feeding at the same time, I think Johnny’s work was the best and most significant,” Monfort told the Denver Post for a feature about Matsushima, headlined “Genius of the feedlots” and published in 1987.

“I don’t think Colorado would be a top-five cattle feeding state if it wasn’t for Johnny’s work,” said Daryl Tatum, a professor in CSU’s Department of Animal Sciences, who is among those calling Matsushima’s torch in understanding links between nutrition and meat quality “Johnny did as much as anybody in teaching and research and to elevate the commercial cattle feeding industry in Colorado and elsewhere. He was a game-changer.”

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Matsushima, who immigrated from Japan.

In 1920 at Mercy Hospital in Denver, he was named Kiichiro and lived his early years in what he describes in his autobiography as a wooden shack near Lafayette. His cradle was an apple crate.

The Matsushima family was poor, but his parents, who had eight children, raised $8,000 in cash at the outset of the Great Depression and bought an 80-acre irrigated vegetable farm near Platteville. They focused on farm work, and as an adolescent Matsushima began contributing to family income by trapping and skinning muskrats, then selling the pelts for $1 each. He used some of the money to buy dairy calves, which he raised and sold for more profit.

He advanced to officer positions in FFA and 4-H, later using project income, combined with scholarship earnings for graduating as valedictorian of his class at Platteville High, to attend what is now Colorado State University.

It was a struggle financially. Matsushima worked his way through school and wore the same shoes all the way through college.

John Matsushima: Embodifying the land-grant university mission

Matsushima worked in beef-cattle nutrition beginning in the 1960s. His career has been unique in its emphasis on improved efficiency for cattle feeders and meat quality to fulfill consumer demands. His career highlights:

- Pioneered the use of steam to transform corn kernels and other feed grains into flakes, increasing digestibility. This greatly boosts feed efficiency in cattle — by 10 percent or more in some cases — cuts the amount of corn needed in feedlot rations, and increases profitability for cattle feeders.

- Taught an estimated 10,000 undergraduate students at the University of Minnesota, University of Nebraska and Colorado State University. Served as major adviser to 53 graduate students pursuing master’s and doctoral degrees.

- Partnered with Colorado cattle feeders to put discoveries into action, promoting beef to its status as a $3-billion agricultural sector in Colorado and the state’s top commodity. Colorado is ranked as the fifth state in the nation for cattle on feed. Colorado is ranked as the fifth state in the nation for cattle on feed.

- Began use of antibiotics as an additive in cattle feed, which significantly reduced incidence of liver abscess and other health problems.

- Perfed feedlot rations through scientific studies of ingredients.

Matsushima worked closely with Japanese officials to open that country and other Asian markets to U.S. beef exports in the 1980s. This meant developing guidelines for import and export, and addressing knotty legal, economic and food-safety issues.

He has authored numerous scientific papers and books, including a self-published autobiography, titled “Broad Horizon — I Fear No Boundaries,” released in fall 2011.

Notable honors

1963: Top Choice Award from the Colorado Cattle Feeders Association, now the Colorado Livestock Association.

1984: National 4-H Alumni Recognition Award from the National 4-H Foundation.

2002: Best Teacher Award from the Colorado State University Alumni Association and Student Alumni Connection.

2003: William E. Morgan Alumni Achievement Award from the Colorado State University Alumni Association. This is the association’s highest honor and is awarded to alumni who have excelled nationally and internationally.

2005: Japanese Emperor Citation, or “Tenno Hoshi,” presented at the Imperial Palace in Tokyo. He was honored for promoting quality beef in Japan, pioneering steam flaking of corn, and teaching thousands of animal science students.

The award typically is given only to national dignitaries and corporate leaders.

2010: Colorado Agriculture Hall of Fame induction by the Colorado CFA Foundation; inducted into the Colorado CFA Hall of Fame the same year.

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Vaughn Cook, an expert in equine reproduction and owner of Royal Vista Equine in Fort Collins, received the 2012 Honor Alumnus Award from the College of Agricultural Sciences in early October for his contributions to the college, its students, and the horse industry.

“Vaughn’s encouragement, support, and teaching standards have influenced the careers of countless CSU graduates, and he has been a key factor in placing them throughout the industry,” said Gary Carpenter, industry outreach and liaison director for the college’s renowned Equine Sciences Program.

“Through his expertise, knowledge, and rare insight as a horseman and businessman—and his affiliation with research and science—he has helped to advance the state of the art of equine reproduction and equine research for the benefit of the horse and the industry,” Carpenter said. Cook received his award at Colorado State University’s annual Distinguished Alumni Awards Dinner and Program on Oct. 4. The CSU Alumni Association hosted the program at the start of homecoming weekend.

Cook, who was raised on a Thoroughbred racing farm in southeastern Colorado, graduated in 1974 with a bachelor’s degree in animal science. Since then, he has helped to advance cutting-edge equine reproductive technologies, has ascended to notable leadership positions in the horse industry, and has worked closely with CSU and its students.

After graduating, Cook started work at CSU’s Equine Reproduction Laboratory, eventually collaborating on the lab’s landmark research projects in equine reproduction and embryo transfer.

B.W. Pickett, former director of the Equine Reproduction Laboratory, and Dr. James L. Voss, former dean of the CSU College of Veterinary Medicine and Biomedical Sciences, started a stallion reproduction consulting service; Cook traveled with them across the country, handling top-stallions from all breeds. He ultimately managed the lab’s clinical embryo transfer services, bringing it national acclaim.

In 1992, Cook left the Equine Reproduction Laboratory, and he and his wife, Jill, a CSU veterinary graduate, began running Fossil Creek Equine Services. The Cooks then established Royal Vista Equine, a breeding management company, which has gained national prominence as a premier embryo transfer facility.

The Cooks also founded a Quarter Horse racing breeding facility, Royal Vista Ranches, in Wayne, Okla. The stallion lineup at Royal Vista Ranches has included such champions as Wave Carver and Ivory James. The Cooks have also raised and owned several Quarter Horse graded stakes-winning homebreds, at the top of the list is 2006 AQHA World Champion Quarter Running Horse Wave Carver, who they co-own.

In addition to his successful business operations, Cook has been involved professionally in the horse industry at the state and national levels. He is the American Quarter Horse Association director for Colorado and has served on several national committees, including AQHA’s stallion book and registration committee and the research committee.

He has helped advance the state of the art of equine reproduction.” — Gary Carpenter, CSU Equine Sciences Program

Vaughn Cook, 2012 Honor Alumnus Award winner from the College of Agricultural Sciences, is an expert in equine reproduction and a leader in the horse industry. He and his wife, Jill, a CSU veterinary alumna, own Royal Vista Equine and Royal Vista Ranches.

Dennis Repp, who earned a bachelor’s degree in agricultural business in 1960, received the 2012 William E. Morgan Alumni Achievement Award from the CSU Alumni Association. After graduating from CSU and completing two advanced degrees, Repp built a remarkable career in business and finance. He managed venture capital operations for Allstate Insurance, and later founded businesses with innovations in technology and biotechnology. With his successful ventures, Repp has become a philanthropist focusing on poverty, education, and the needs of wounded military veterans.

Milan Rewerts, a longtime friend of the College of Agricultural Sciences, received the Distinguished Extension Award from the CSU Alumni Association. Rewerts, who earned a master’s degree in 1974, worked for CSU Extension for nearly 40 years before retiring in 2005. Rewerts was director of CU Cooperative Extension during the last decade of his career. He worked with several regional and national Extension and agricultural leadership groups, including serving as chair of the Western Regional Extension Directors. Rewerts has received many honors, including the Distinguished Service Award from the National Association of Extension 4-H Agents.

Rewerts earned the Distinguished Extension Service Award from the CSU Alumni Association. He is a decorated retired colonel of the U.S. Army Reserve.
“It’s been a dream since I watched Silver Charm race in the Kentucky Derby.”
— Caroline Kamer, ’09

Charmed, for SURE

Equine graduate lands first job in marketing for Churchill Downs

Like many of our students, Caroline Kamer did not grow up on a farm or ranch. But she did grow up in Louisville, Ky., home of Churchill Downs and the Kentucky Derby. Kamer developed a love for horses and started English riding lessons at age 5. She later showed American Saddlebreds, a breed developed in Kentucky. Kamer also became a racing enthusiast and was smitten with Silver Charm, a legendary gray Thoroughbred who won the 1997 Kentucky Derby and the Preakness Stakes in the Triple Crown. Little did the young horse lover know that Silver Charm would lead her to enroll in the Colorado State University Equine Sciences Program — and on to an amazing first job at Churchill Downs. While visiting campus last summer, Kamer, 26, sat down with Food for Thought editor Coleman Cornelius to discuss her uphill career.

Food for Thought: You grew up across the country in Louisville, Kentucky, so what drew you to majoring in equine science at CSU?

CK: Because of my love for Silver Charm and racing, in high school I had the opportunity to tour Three Chimneys Farm in Midway, Kentucky. Silver Charm had retired to stud there. I was talking to a stallion manager, and I asked, ‘Where do you hire the most people from?’ She said, ‘Colorado State University.’ Their equine program is great! I started looking at it and fell in love. My family always came out to Colorado to ski. I already loved the state, and I came out for a visit my junior year, and I was like, ‘This is the place I want to be.’ It’s funny how Silver Charm linked it all in.

Food for Thought: You were charmed by Silver Charm, and then you were charmed by Colorado and CSU. But why did you decide to major in equine science, rather than some other discipline?

CK: I just knew that I couldn’t have a job that didn’t involve horses. So whether that be business, or marketing, or actually working in the barns, I just knew it had to revolve around the horse to make me happy for a lifelong career. After searching and finding out more about CSU, I just thought it would be great. There were so many business classes involved that I knew it would be a well-rounded degree, and definitely the best in the nation.

Food for Thought: How did you wind up working at Churchill Downs?

CK: During the summer between my freshman and sophomore years at CSU, I worked on the backside at Churchill Downs, in the barns. I found out that a woman I had ridden Saddlebreds with was working in the Brand Development and Marketing Department. The next summer, I reached out to her and asked for a networking interview, and she said, ‘Absolutely!’ I kept in touch with her, then she reached out to me probably six months after I graduated from CSU and said, ‘Hey we have an opening for a seasonal employee. Are you interested?’ So the very next day I had an interview with the entire team, and I was lucky enough to get the position. It really taught me the importance of reaching out. Don’t be scared; it’s OK to network. Most people are happy to speak with you.

Food for Thought: For people who are not in communications, explain what it means to be a brand development and marketing coordinator.

CK: Sure. Not only do we carry out marketing for all the events at Churchill Downs racetrack — including the Kentucky Derby and Kentucky Oaks — we also develop new products and strategies to extend the reach of our brands and marketing. I play a large role in rebranding and creating new strategies for all of our websites, which includes churchilldowns.com, kentuckyderby.com, and kentuckyoaks.com. I also took over our social media. We call out our fans Derby Nation, so it’s Derby year-round. It was very cool taking that over at 55,000 fans, and today it’s over 220,000 fans. I developed our strategy with Twitter, and developed our mobile applications for iPhone and Android, for both Churchill Downs and the Kentucky Derby. My team supports all the different departments, and we’re always developing something new.

Food for Thought: But you started down this career path because of your love for horses and horse racing. Now you are truly in communications — and fairly technical communications at that — so your expertise has gone down another path. How are the two fields linked for you?

CK: One thing I realized, even working at Churchill Downs, is 99 percent of people don’t know anything about a horse. So I became very valued because I do have that knowledge. I do know how to make information both understandable and accurate for horsemens and our core horse player, as well as for the horse enthusiast and the entertainment fan. All our fans are horse enthusiasts. That’s the common bond, and that’s where I think I bring a lot to the table.

Food for Thought: In what ways do you think your degree in equine science and your minor in business administration prepared you for your job?

CK: My classes — from Intro to Equine Science, Equine Reproduction and Equine Disease Management — gave me the background to answer a lot of fan questions without even having to look it up. I can answer clearly and concisely and make it understandable to the fan. That’s been essential. The business classes were also great — Marketing, Management, Entrepreneurship — and gave me a strong base for this job. So it’s a really well-rounded degree. I feel like I left CSU with a lot of flexibility.

Food for Thought: What has been the most fun aspect of your job at Churchill Downs?

CK: I’m very tuned in to it. I feel like if I’m going to educate our fans through social media platforms, I need to be. A lot of people ask, ‘Why would a horse even be on bute?’ (the anti-inflammatory drug phenylbutazone). So I need to be able to explain things clearly, and also represent the company the way I need to.

Food for Thought: What is the most important aspect of your job at Churchill Downs?

CK: I’m in charge of the Kentucky Oaks Survivors Parade, a parade for ladies who have survived cancer. The Kentucky Oaks, as a race for fillies, is a day to celebrate women, and the Survivors Parade is on the track right before the race. There’s a lot of coordination, and it’s really rewarding. Also, as a horse fan, it’s great just getting so close to the athletes. I’ll wake up early and go see the workouts of the Derby horses before work. Just being close to these amazing horses has been a dream come true for me.

Food for Thought: What is the place to work as a person in the horse industry? Congratulations to you.

CK: Thank you. It’s been a dream since I watched Silver Charm race in the Kentucky Derby and saw the Twin Spires at Churchill Downs. I’m the only person on my team who goes back to work to watch the races. This is where I want to be, even on my day off. I just love it through and through.

Connect with your dream career

The Career Services office in the College of Agricultural Sciences helps students identify career interests, connect with potential employers, apply for jobs, and successfully land jobs in their chosen career fields. The office organizes career fairs and resume reviews. Services are free. Contact Career Center Liaison Beka Crocket at beka.crockett@colostate.edu or (970) 491-3721.

Caroline Kamer
Graduated: 2009, bachelor’s degree, equine science, minor, business administration.
First job: Brand Development & Marketing Coordinator, Kentucky Derby

Colorado State University
AG FAMILY | YOUNG ALUMNI SPOTLIGHT

www.ag.Colostate.edu
Gracefully floating across a sheet of ice and feeling the cold wind in my hair, the thrill of landing a jump and the exhilaration of a fast spin - these are a few reasons I’ve been figure skating competitively for 14 years, since I was 5 years old. It might seem odd that a girl who has spent most of her time in a 32-degree ice rink would adopt the lifestyle of a city girl. Yet farm animals caught my attention. Starting in second grade, I made deals with my mom that if I got good grades, I could join the 4-H club. As my love for agriculture grew, I became a member of 4-H and when I got good grades. As my love for agriculture grew, I became a member of 4-H and

Malinda DeBell consults with Temple Grandin, a renowned CSU professor, on a facility design DeBell created for Grandin’s livestock management. DeBell works closely with students and faculty across the College of Agricultural Sciences to help improve people’s lives. From the time we awake in the morning, we’re using agricultural products. Does your bed contain cotton or silk sheets, or feather pillows? As you get ready for the day, do you use water, soap or lotion? Does your kitchen contain fruits, vegetables, grains, milk, sugar, eggs or meat? Did you feed your pet before you left this morning? Did you drive a car with fabric or leather seats? If you’re like me, you answered “yes” to most of these questions, meaning you’re an avid consumer of agricultural products. I’ve also learned that other agricultural students – whether from a farm and ranch background or not – share my passion for using agricultural sciences to help improve people’s lives. Recent Department of Animal Sciences graduate Natalie Blackmer told me, “Ag science allows me to use my knowledge and love of animals to directly impact society by helping to provide safer food products and healthier lifestyles through zoonotic disease prevention.” Katlin Hornig, another Animal Sciences graduate who is now a CSU veterinary student, said, “Agriculture is the heart of everything, our heritage, our soul and our being.” Austin Piombo, a student from California who is studying agricultural business at CSU, said, “I have a strong passion for the ag industry and everyone who is a part of it. Agriculture has taught me so many life lessons and has given me experiences that I would have never had. It allows you to reach out and get involved.” In a world where the population is expected to reach 9 billion by 2050, there is an essential need to produce more food and agricultural products with less land and fewer resources. I may have little experience, but I am obtaining a degree in animal science. She is a member of the Agricultural Ambassadors student leadership program and other student groups in the College of Agricultural Sciences. During fall 2012, she has been writing opinion columns – including this one – for the Rocky Mountain Collegian, the campus newspaper, to share information about agriculture with other CSU students. The day concluded with a visit to the CSU Soil, Water and Plant Testing Laboratory, where a discussion about soil fertility quickly became a detailed chemistry lesson. Another group of students worked late last summer at the CSU Horticulture Field Research Center north of Fort Collins, where they helped conduct variety trials for specialty crops and assisted with research into viable strategies for increasing yields. Much of this research focuses on fresh-market tomato varieties, chiefly because tomatoes are the highest value crop grown for direct marketing to consumers. The students pointed to cultivars including Cherokee Purple, Amish Paste, Arkansas Traveler, Stupin Green and Zebra – tomatoes as colorful as their names. The varieties were studied in a production system of tall trellising under high tunnels, a simple greenhouse system covered with screening that effectively extends the growing season and thwarted pests. Sara Kammlade, a graduate student in horticulture with a focus on organic agriculture, popped a tomato into her mouth. “We love our jobs. There’s something about caring for plants, raising them and harvesting them that’s really fulfilling,” she said. “Plus, we get to eat the fruits of our labor!” sustained. The U.S. Department of Agriculture listed the pathogen as a potential agent of hotteroomism because of ramifications for food security if it were mishandled. The pathway cannot spread in Colorado because of the state’s dry climate, cold winters, and because rice, the host plant, is not present. In a world where the population is expected to reach 9 billion by 2050, there is an essential need to produce more food and agricultural products with less land and fewer resources. I may have little experience, but I am obtaining a degree in agriculture so that I can help improve and change the world for others. Does your bed contain cotton or silk sheets, or feather pillows? As you get ready for the day, do you use water, soap or lotion? Does your kitchen contain fruits, vegetables, grains, milk, sugar, eggs or meat? Did you feed your pet before you left this morning? Did you drive a car with fabric or leather seats? If you’re like me, you answered “yes” to most of these questions, meaning you’re an avid consumer and greenhouse: the tracking of every single rice plant used in experiments; sealed and guarded work spaces; complex decontamination procedures, regular inspections; even screening and fingerprinting of lab workers by the Federal Bureau of Investigation. “This bacteria is an old friend,” said Leach. “I’m very excited to see where this will go.” When people learn about a space, they’re more likely to take care of it, says student Sara Kammlade, left, and professor Deb Matsushima, right. The Kuner Feedlot surveying cattle, he explained his ongoing quest to gain and share information. “Knowledge never goes out of season,” he said.
Harvey Achziger, who received a bachelor’s degree in agricultural sciences in 1956, was inducted into the CU-Sports Hall of Fame at a banquet on Oct. 26. Achziger, who lives near Columbia, S.C., was a three-year starter of offensive tackle. He was a two-time All Conference player, a First-Team All-Americans, and played for a year with the Philadelphia Eagles in the NFL.

Thomas Adair, who earned a master’s degree in forensic entomology in 2004, has published a thriller titled “The Sculpt of Fear,” inspired by his 15-year career as an investigator with the Westminster Police Department and Arapahoe County Sheriff’s Office. Adair has been board certified as a senior crime scene analyst, and is an expert in bloodstain pattern analysis and forensics examination at crime scenes.

William A. Berg, who earned bachelor’s and master’s degrees in agronomy in 1955 and 1958, was recognized as an Honored Alumnus of the Department of Soil and Crop Sciences. Berg, professor emeritus at Colorado State University; and has worked as a research crop advisor who owns Fehringer Ag Strip Tillage and has served on several agricultural advisory committees.

Chris Kraft, owner of Badger Creek Farms and Oaill Ridge Dairy, was a feature speaker at the “Future of Food” forum presented on June 28 in Denver by the Washington Post Live and sponsored by the Western Dairy Association. Kraft, who earned a bachelor’s degree in animal science in 1989, was part of a panel discussion that also featured Colorado State University President Tony Frank and Colorado Commissioner of Education Robert Hammond. The three discussed critical links between food production and education.

Walt D-Feki, who received a doctoral degree in soil and crop sciences in 2010, returned to the Department of Soil and Crop Sciences to work as a post-doctoral research associate on drought-tolerant wheat. D-Feki is an assistant professor in the Department of Crop Sciences at the Faculty of Agriculture, Alexandria University Egypt.

Robbie LeValley, who earned bachelor’s and master’s degrees in animal science in 1987 and 1989, was guest speaker at the 10th annual Calf to Brisket fundraiser at the Kansas State University Foundation. During his career, Cholick has held a variety of leadership roles with national and international academic, scientific, and industry organizations that advance education, agriculture, and international agricultural development.

Real Feininger, who earned a bache- lor’s degree in agronomy in 1979, was recognized as an Honored Alumnus by the Department of Soil and Crop Sciences in September. Feininger is a Certified Professional Agronomist and Certified Crop Advisor who owns Feininger Agri- cultural Consulting Inc. based in Bilings, Mont. He consults extensively, provides expert-witness services, and performs contract research. Feininger has worked for many years with the energy industry, analyzing soil, crop and water impacts of natural-gas production. He also runs Feininger Ag Strip Tillage and has served on several agricultural advisory committees.

Micl Livingston, who earned a bache- lor’s degree in animal science in 1973, received the Alton Scottfield Award from Colorado State University Extension during an annual banquet on Nov. 5. Livingston is a 4-H youth agent with CSU Extension, working in the Golden Plains Area, which is headquartered in Burlington. His Extension peers nominat- ed Livingston, and he was selected from a large pool of nominees. Livingston has been active in leading youth education programs, including Agfest, Wild Bug Fish Camp and the Meat Quality Assur- ance program. Agfest alone reached more than 1,200 young people in East- ern Colorado. The Alton Scottfield Award recognizes sustained superior service by an Extension professional throughout his or her career.

Stephen D. Miller, who received a bachelor’s degree in agronomy in 1968, received the inaugural Andrew Vigil Distinguished Lifetime Achievement Award from the University of Wyoming in September. The award recognizes Miller’s leadership in weed science and conservation research and teaching, and his dedication as a longtime UW professor and director of the Wyoming Agricultural Experiment Station.

Clint Rusk, who earned master’s and doctoral degrees in animal reproductive physiology in 1992 and 1997, became head of the Oklahoma State University Department of Animal Science in July. While at CSU, he earned the Charles N. Stimpson Award for Student Teaching Award. Rusk earlier worked as head of the Department of Animal Science at South Dakota State University. Burt Rutherford, who graduated in 1990 with a degree in agricultural journalism, was honored with the annual Ambassa- dor Award from the Beef Improvement Federation for his work as an editor for BEEF magazine. The federation gives the award to a media representative for efforts communicating about beef industry issues. Rutherford works in Amarillo, Texas.

Laura Teague, who earned a bachelor’s degree in animal science in 1990, serves as a county commissioner representing Fort Morgan in Morgan County, Colo. She and her husband, Gary Teague, who also studied at the college, own Teague Diversified Inc. The business encompasses a 25,000-head feedlot, 2,500 cows, and ranches in Nebraska and Colorado. Gary Teague presented the talk, “Family and Business are the Keys to our Livestock Operation,” at the recent Beef + Transparency = Trust seminar held by the Department of Animal Sciences in Denver.

Mere F. Vigil, who received bachelor’s and master’s degrees in agronomy in 1980 and 1983, was named a fellow of the American Society of Agronomy. Vigil is the research leader and a soil scientist at the U.S. Department of Agriculture-Agricultural Research Service Central Great Plains Research Station in Arnon, Colo. His fellowship was con- veyed during the society’s international scientific meeting in Cincinnati, Ohio, in October.

Bill and Sylvia Webster, who earned bachelor’s degrees in 1957, served as grand marshals of the Greeley Stampede and Independence Day Parade last summer. Bill, who received a degree in agricultural economics, and Sylvia, who earned a degree in social science, are longtime Greeley residents and supporters of the Stampede, known as the world’s largest Fourth of July rodeo and Western celebration. Bill, former president of Webster Land and Cattle Co., also has been active with the National Cattlemen’s Association, the United Way of Weld County, and the Greeley Planning Commission. Sylvia, founder of the North Colorado Medical Center Foundation, has served on the local school board and has been active with Weld County arts and charitable organizations.

Paul Freebury, a senior in the Department of Horticulture and Landscape Architecture, worked as student coordinator for CU-SR’s Annual Flower Trial Garden, a germ in northeastern Colorado and the largest university trial garden west of the Mississippi River. The role spanned nearly a year and included a variety of research and management responsibilities, including oversight of the student crew whose work makes the Trial Garden a mainstay of the College of Agricultural Sciences.

The Animal Sciences Academic Quadrathlon team won three of the four sessions for the Western Section – Na- tional Academic Quadrathlon Compet- ition in July. Students representing the Department of Animal Sciences in the national competition were Natalie Braceline, Jaretta Davis, Emily Thomec and Katlin Wright.

The Animal Sciences Livestock Judging Team was champion of the livestock judging contest at the State Fair of Texas in Dallas on Oct. 8. Team members competing were Kaycey Valtman, Cody Ufford, Dennis Brown, Whitney Dunn and Barba Davis.

Cheryl Bowker, a doctoral student in the Graduate Degree Program in Ecology, earned an Ely Allen Fellowship from Sigma Delta Epsilon Graduate Women in Science. The fellowship comes with a $5,000 award for research. Bowker was one of 10 fellows selected from nearly 200 applicants nationwide. Her award supports a research project called “Intro- duction history and patterns of spread of a trophic system in a novel habitat.”

Emmanuel Caldera, a graduate student studying ruminal nutrition in the Depart- ment of Animal Sciences, attended the Latinx in Agriculture Leaders Forum in San Antonio in October. Caldera attended presentations about opportunities for Latinx professionals in the agricultural industry. He also took part in a student panel, “What Will I Take To Recruit Me? Hispanic Students Share Their Perspective.”

Jessica Davis, is the Department of Soil and Crop Sciences, earned “College Scholars” for her presentations at 2012 Celebrate Undergraduate Research and Creativity. Her poster was titled “Comparison of Coleost Leptica in Synthetic-Derived Winter Wheat.”

Clint Rusk

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Students News

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Members of the CSU English Riding Club traveled to Edinburgh, Scotland, to ride in the Royal (DkS) School of Veterinary Studies Horse Society International Invitational Horse Show in May. The six students rode horses provided by the University of Edinburgh. The CSU students participating were Callie Caldwell, Emily Diston, Taylor Englehart, Morgan Klett, Jake McDermott and Delani Miller.

We’ve got nice MANRRS! Students in the CSU chapter of Minorities in Agriculture, Natural Resources, and Related Sciences won third place in CNRNutrition this fall. The design contest is part of Cani-Around the Oval, CSU’s annual food drive to benefit the Food Bank for Larimer County. The MANRRS chapter donated 564 pounds of food. Students pictured here are Codi Brooke, Carrie Johnson and James Calabaza.

We’re happy to announce that we’ve got a new student ambassador to the CSU Alumni Association, Donald Hodgkinson, from Longmont, Colo. He was a senior majoring in plant biotechnology, genetics in soil and crop sciences with a concentration in plant biotechnology, genetics and breeding, was named a Golden Opportunity Scholar by the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. Hodgkinson, from Burlington, Colo., attended the societies’ international scientific meetings in Cincinnati, Ohio, in October. He too part in a special mentorship program to gain guidance, professional contacts and encouragement in his chosen career field.

Hannah Larsen, above, a senior majoring in animal science, was selected to serve as Presidential Ambassador during 2012-13. These student leaders represent the Office of the President at special events and activities, interact with an array of university constituents, and work to advance public understanding of CSU and its role in student growth and success.

Eight College of Agricultural Sciences students were selected to represent CSU at the National FFA Convention in Indianapolis in October. The students toured the theme, “FFA + CSU – We Launch Leaders.” Those attending were Elizabeth Boyd, Shelby Cochran, Bailey Field, Carfyn Korsch, Jennifer LaTour, Landan Schaffert, Shelia Smith and Tyler Witter.

Katie Hennig, above, a spring 2012 graduate in animal science, earned the Charles L. Shepardson Agricultural Student Leadership Award in May and was a涣tuded speaker during commencement. Hennig, who since has entered CSU’s Professional Veterinary Medical Program, grew up raising Brabant Belgian draft horses in southern Colorado. She earned a coveted Berteunciher Scholarship and was in the University Honors Program. Her senior honors research project was titled “A Comprehensive Study of Carbohydrate and Fat Metabolism in Dumes Thoroughbred and Post-Partum,” in which she identified a more accurate way to diagnose pregnancy toxemia in sheep. Hennig was an Agricultural Ambassador in the College of Agricultural Sciences and worked at the CSU Veterinary Teaching Hospital.

Kacie McCarthy, a senior majoring in animal science, has excelled as pitcher for the Colorado State University softball team. McCarthy was named 2012 Mountain West Conference Pitcher of the Year, then was selected to the National Fastpitch Coaches Association’s Pacific Region second team. Her talents extend to the classroom: McCarthy, from Shingletown, Calif., was among 68 CSU student-athletes to earn academic all-conference accolades from the Mountain West during winter and spring seasons. Photo by Dan Byers

Three members of the College of Agricultural Sciences faculty and staff finished the 2012 Ride the Rockies, a grueling bicycle ride that spanned six days, 442 miles, and 24,907 vertical feet of elevation gain in Colorado’s Rocky Mountains. Completing the ride were Karen Allison, student coordinator in the Department of Soil and Crop Sciences (top, pictured on left with friends atop Trail Ridge Road in Rocky Mountain National Park); Ed Peyronnin, director of information technology for the college; and Zach Johnson, an associate professor in the Department of Horticulture and Landscape Architecture (Peyronnin, above left, Johnson and are shown at the summit of Independence Pass near Aspen).

Josie Atela, left, assistant professor of beef production systems, was named a Top 10 History Leader for the region by Cattle Business Weekly, a leading agricultural newspaper. Atela was the only Colorado professional recognized. He was cited for work as faculty advisor to the CSU Seedstock Merchandising Team, which goes Animal Sciences students hands-on experience in the beef business.

Faculty and Staff News

Continued on page 44
Temple Grandin, professor in the Department of Animal Sciences, was the featured guest at a public event hosted by the Rocky Mountain PBS in August. The event included a showing of “The World Needs All Kinds of Minds,” a 35-minute documentary about Grandin and her work, which was produced by Colorado State University Communications and Creative Services. Grandin, a world-renowned animal-welfare expert who has overcome personal struggles with autism, also took part in a question-and-answer session with the audience. The event raised $5,000 for the Dr. Temple Grandin Scholarship in Animal Behavior and Welfare, which supports Grandin’s graduate students. Photo by Rosalie Winard

Rajee Khosla, above, professor of precision agriculture in the Department of Soil and Crop Sciences, earned the Applied Research Award from the Soil Science Society of America. Khosla has developed an undergraduate program in applied information technology in agriculture. She has served as president of the International Society of Precision Agriculture. Khosla also serves on a federal panel, called the National Space-Based Positioning, Navigation and Timing Advisory Board. The board, sponsored by NASA, helps develop national policy on the use of space-based technologies. In 2012-13, Khosla holds an appoint- ment as a Jefferson Science Fellow. The following program, coordinated by the National Academies, allows Khosla to work with the U.S. Department of State to shape federal policy on global food security.

Lawrence Goodridge, a food microbiologist in the Department of Animal Sciences, will help host the premier international scientific meeting regarding foodborne E. coli infections that pose global health concerns. The next international Symposium on Verocytotoxin Producing Escherichia coli Infections will be in Boston in 2015. Goodridge, an associate professor and researcher, specializes in development of novel methods to detect and control the spread of foodborne pathogens, with a focus on E. coli. Other hosts will be the Agricultural Research Service Food Safety Program and Ohio State University.

Ruby Flores, above, assistant director of undergraduate programs for the college, was a member of the planning committee for the second annual Latinos in Agriculture Leaders Forum in San Antonio, Texas, in October. The forum brought together industry, education and government representatives to explore ways to improve professional Latino representation in agriculture and related industries.

Jorge Vivanco, below, assistant professor in the Department of Animal Sciences, received the 2012 Jeannie Borlaug Laube Women in Science Award for women working in wheat during their career. Vivanco is among five international award recipients in 2012. She was invited to a seminar for importers and distributors in Santiago, Chile, one of the hottest global markets for U.S. beef. She also presented a seminar for importers and distributors in Santiago, Chile, one of the hottest global markets for U.S. beef.

Kevin Peru, above, head of the Department of Animal Sciences, has been named secretary of the National Association for the Advancement of Animal Science. The association serves to advocate more effectively for federal research funding in animal agriculture. The group is made up of heads of university departments dedicated to animal agriculture, they represent universities nationwide.

Robert A. Young, professor emeritus in the Department of Agricultural and Resource Economics, was honored and featured speaker at the department’s inaugural Legacy Lecture in September. Young discussed his career as a water resource and agricultural policy economist with more than 40 years of applied research, teaching and consulting experience. He also conferred the first Dr. Robert A. Young Scholarship in Water Economics to recipient Allison Guinto, a graduate student in the department. Young, who continues to work nationally and internationally, has focused on methods for economic evaluation of proposed public policies for investments in and allocation of water supplies. His book, “Determining the Economic Value of Water: Concepts and Methods,” was published alongside with support from the World Bank, was published by Resources for the Future in 2005.

Hoa Roman-Moriz, a faculty member in the Department of Animal Sciences and extension dairy specialist, received an award sponsored by Water PK Inc. and the CSU Athletic Department recognizing her dedicated service and excellence in teaching. The award was conferred by Ram Student-Athletes at a home football game.

Tori Valdez, a research associate in the CSU Wheat Breeding Program, received the 2012 Jeanne Borlaug Laube Women in Triticum Award. This award provides professional development opportunities for women working in wheat during the early stages of their career. Valdez is among five international award recipients in 2012. She was invited to a technical workshop in Beijing, China, in September.

Jorge Vivanco, a professor of crop sciences, is serving as a mentor for the NITRoGEN Ideas Lab coordinated by the National Science Foundation. He will help select participants in the Ideas Lab and will assist in developing research projects that investigate the role of nitrogen in producing food, while reducing pollution and greenhouse gas emissions.

Dale Weerner, meat scientist and assistant professor in the Department of Animal Sciences, helped host a group of editors from Korea’s leading lifestyle magazines at CSU’s Agricultural Research, Development and Education Center in Fort Collins in early September. The tour highlighted the quality and safety of U.S. beef for influential media representatives in Korea, the No. 1 market for U.S. beef exports. Other stops included a Wyoming cattle ranch and a high-end Manhattan steakhouse. The U.S. Meat Export Federation, based in Denver, organized the tour. Also in September, Weerner presented information about U.S. beef production, processing and grading during a seminar for importers and distributors in Santiago, Chile, one of the hottest global markets for U.S. beef.

Thomas Borch, below, an associate professor of environmental chemistry and biogeochemistry in the Department of Soil and Crop Sciences, was one of 15 international researchers identified as “Emerging Investigators” by the prestigious Journal of Environmental Monitoring in June. As part of the honor, the journal published a research paper from Borch, titled “Determination of contaminant levels and remediation in situ recovery uranium mine.” The journal called Borch and the other honorees “the new elite” in the field of environmental science and engineering.

Patrick Byrne, graduate student coordinator and a professor of plant breeding and genetics in the Department of Soil and Crop Sciences, was named a fellow of the Crop Science Society of America. Byrne’s research focuses on the application of quantitative and molecular genetics to crop improvement. Since 2000, Byrne has led public outreach programs on the risks and benefits of genetically engineered crops, making presentations statewide, nationally and internationally on the hot-button topic.

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Ruben Flores, above, assistant director of undergraduate programs for the college, was a member of the planning committee for the second annual Latinos in Agriculture Leaders Forum in San Antonio, Texas, in October. The forum brought together industry, education and government representatives to explore ways to improve professional Latino representation in agriculture and related industries.

Ajo Jha, assistant professor of international horticulture, and William Spencer, emeritus associate professor of agricultural and resource economics, led a study tour for 10 senior-level water-management and horticulture professionals from Pakistan in June. The tour was supported by funding from the U.S. Agency for International Development. The tour provided visitors with insights into watershed management, conservation practices, irrigation technologies, and other strategies critical to improved production of high value horticultural crops, even with limited water supplies.

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Morsels

Beef workshop offers facts from the inside

Building consumer trust was the aim of a dialogue event called Beef + Transparency: Trust, held Oct. 3 at the Renaissance Hotel Denver and organized by faculty in the Department of Animal Sciences. Attending the event were about 110 invited food writers, dentists, chefs and representatives of agricultural media outlets. These attendees — who influence consumer opinions and decisions — gained information about modern beef production from about a dozen scientists, business people and family ranchers. The seminar addressed a rise in consumer interest about food sources by providing facts from those who know most about beef production. The event was supported by the Colorado Beef Council, with input from the Colorado Cattleman’s Association and Colorado Chefs Association. Faculty member Travis Hoffman was lead organizer of the event, with help from Dale Woerner, assistant professor with CSU’s Center for Meat Safety and Quality.

Lecture delves into a-maize-ing possibilities

The 13th annual Thornton-Massa Lecture in early November featured an invited public talk by Edward Buckler, a leading plant geneticist with the U.S. Department of Agriculture Agricultural Research Service and Cornell University. Buckler discussed ways to use cutting-edge genetic tools to improve corn for yield, drought tolerance, nutritional value, environmental benefits, and even perennial cropping. Buckler was named 2011 Distinguished Senior Research Scientist by USDA-ARS for developing maize with significantly higher levels of carotenoids for subsistence farmers in sub-Saharan Africa, where corn is a dominant food crop and vitamin A deficiencies often cause childhood blindness and immune dysfunction. The Thornton-Massa Lecture is presented by the colleges of Agricultural Sciences and Natural Sciences; it is generously supported by the families of the late Emil Thornton and Bruce and Mildred Thornton, who believed in the importance of advanced plant sciences.

Monfort earns honorary doctorate for contributions

Dick Monfort, who has long ties to agriculture and Colorado State University, received an honorary doctoral degree during university commencement in May. President Tony Frank conferred the Doctor of Humane Letters, Honoris Causa, in recognition of Monfort’s significant contributions to Colorado, industry and higher education in northern Colorado. Monfort is owner, chairman and chief executive officer for the Colorado Rockies and chief executive officer for the Colorado Rockies and owner, chairman and chief executive officer of the Colorado Rockies and Chief Executive Officer for the Colorado Rockies. Monfort is owner, chairman and chief executive officer of the Colorado Rockies and Chairman of Colorado, industry and higher education in northern Colorado. Monfort is owner, chairman and chief executive officer for the Colorado Rockies and chief executive officer for the Colorado Rockies.

Ag Day 2012, at Hughes Stadium on Sept. 22, was a fall highlight for the College of Agricultural Sciences. The event attracted 9,300 people for a football-day feast of Colorado food. The 31st annual gathering celebrated agriculture while raising money for scholarships awarded to students studying agricultural sciences. Visit www.day.com for next fall’s date, and join us!
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